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<input type="checkbox"/>	L2	L1 with gluconobacter	3
<input type="checkbox"/>	L1	cytochrome with oxidase	2373

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: JP 2001169792 A

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L2: Entry 1 of 3

File: JPAB

Jun 26, 2001

PUB-NO: JP02001169792A

DOCUMENT-IDENTIFIER: JP 2001169792 A

TITLE: CYTOCHROME C OXIDASE ENZYME COMPLEX

PUBN-DATE: June 26, 2001

INVENTOR-INFORMATION:

NAME

COUNTRY

ASAKURA, AKIRA

HOSHINO, TATSUO

SHINJO, MASAKO

INT-CL (IPC): C12 N 15/09; C12 N 1/21; C12 N 9/08; C12 P 7/60

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMAC	Draw D
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☐ 2. Document ID: EP 1103603 A2

L2: Entry 2 of 3

File: EPAB

May 30, 2001

PUB-NO: EP001103603A2

DOCUMENT-IDENTIFIER: EP 1103603 A2

TITLE: Cytochrome c oxidase complex from Gluconobacter oxydans

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMAC	Draw D
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☐ 3. Document ID: EP 1103603 A2, KR 2001051741 A, NO 200005799 A, AU 200071663 A, JP 2001169792 A, BR 200005443 A, CA 2324414 A1, CN 1303928 A

L2: Entry 3 of 3

File: DWPI

May 30, 2001

DERWENT-ACC-NO: 2001-357953

DERWENT-WEEK: 200172

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TITLE: New cytochrome c oxidase complex having cytochrome c oxidase activity from

Gluconobacter oxydans DSM 4025, useful in mediating electron transfer in respiratory chain or producing 2-keto-L-gulonic acid from L-sorbose or D-sorbitol

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	SMC	Draw D
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Terms	Documents
L1 with gluconobacter	3

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=> s cytochrome (5a) oxidase
L1 92991 CYTOCHROME (5A) OXIDASE

=> s l1 (5a) gluconobacter
L2 7 L1 (5A) GLUCONOBACTER

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3 6 DUP REM L2 (1 DUPLICATE REMOVED)

=> d 1-6

L3 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2001:396517 HCAPLUS
DN 135:16027
TI Cloning of ***cytochrome*** c ***oxidase*** complex from
Gluconobacter oxydans and use of the recombinant enzyme for
fermentation of 2-keto-L-gluconic acid
IN Asakura, Akira; Hoshino, Tatsuo; Shinjoh, Masako
PA F. Hoffmann-La Roche A.-G., Switz.
SO Eur. Pat. Appl., 42 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1103603	A2	20010530	EP 2000-124785	20001114
	EP 1103603	A3	20020918		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 2000005799	A	20010518	NO 2000-5799	20001116
	CA 2324414	AA	20010517	CA 2000-2324414	20001117
	JP 2001169792	A2	20010626	JP 2000-351502	20001117
	BR 2000005443	A	20010703	BR 2000-5443	20001117
	CN 1303928	A	20010718	CN 2000-138047	20001117
PRAI	EP 1999-122842	A	19991117		

L3 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:577887 HCAPLUS
DN 115:177887
TI Reconstitution of the ethanol oxidase respiratory chain in membranes of
quinoprotein alcohol dehydrogenase-deficient Gluconobacter suboxydans
subsp. alpha. strains
AU Matsushita, Kazunobu; Nagatani, Youichiro; Shinagawa, Emiko; Adachi, Osao;
Ameyama, Minoru
CS Fac. Agric., Yamaguchi Univ., Yamaguchi, 753, Japan
SO Journal of Bacteriology (1991), 173(11), 3440-5
CODEN: JOBAAY; ISSN: 0021-9193
DT Journal
LA English

L3 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1989:188379 HCAPLUS
 DN 110:188379
 VI Reactivity with ubiquinone of quinoprotein D-glucose dehydrogenase from
 Gluconobacter suboxydans
 AU Matsushita, Kazunobu; Shinagawa, Emiko; Adachi, Osao; Ameyama, Minoru
 CS Fac. Agric., Yamaguchi Univ., Yamaguchi, 753, Japan
 SO Journal of Biochemistry (Tokyo, Japan) (1989), 105(4), 633-7
 CODEN: JOBIAO; ISSN: 0021-924X
 DT Journal
 LA English

L3 ANSWER 4 OF 6 LIFESCI COPYRIGHT 2004 CSA on STN
 AN 87:51944 LIFESCI
 TI Purification, characterization and reconstitution of ***cytochrome***
 o-type ***oxidase*** from ***Gluconobacter*** suboxydans .
 AU Matsushita, K.; Shinagawa, E.; Adachi, O.; Ameyama, M.
 CS Dep. Agric. Chem., Fac. Agric., Yamaguchi Univ., Yamaguchi 753, Japan
 SO BIOCHIM. BIOPHYS. ACTA., (1987) vol. 394, no. 2, pp. 305-312.
 DT Journal
 FS J; L
 LA English
 SL English

L3 ANSWER 5 OF 6 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on
 STN
 AN 87:661700 SCISEARCH
 GA The Genuine Article (R) Number: K9925
 TI PURIFICATION, CHARACTERIZATION AND RECONSTITUTION OF ***CYTOCHROME***
 O-TYPE ***OXIDASE*** FROM ***GLUCONOBACTER*** -SUBOXYDANS
 AU MATSUSHITA K; SHINAGAWA E; ADACHI O; AMEYAMA M (Reprint)
 CS YAMAGUCHI UNIV, FAC AGR, DEPT AGR CHEM, YAMAGUCHI 753, JAPAN
 CYA JAPAN
 SO BIOCHIMICA ET BIOPHYSICA ACTA, (1987) Vol. 894, No. 2, pp. 304-312.
 DT Article; Journal
 FS LIFE
 LA ENGLISH
 REC Reference Count: 23

L3 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1988:33944 HCAPLUS
 DN 108:33944
 TI Purification, characterization and reconstitution of ***cytochrome***
 o-type ***oxidase*** from ***Gluconobacter*** suboxydans
 AU Matsushita, Kazunobu; Shinagawa, Emiko; Adachi, Osao; Ameyama, Minoru
 CS Fac. Agric., Yamaguchi Univ., Yamaguchi, 753, Japan
 SO Biochimica et Biophysica Acta (1987), 894(2), 304-12
 CODEN: BBACAQ; ISSN: 0006-3002
 DT Journal
 LA English

=> d 2-6 ab

L3 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 AB The ethanol oxidase respiratory chain of G. suboxydans was characterized
 by using G. suboxydans subsp. .alpha., a variant species of G. suboxydans
 incapable of oxidizing ethanol. The membranes of G. suboxydans subsp.
 .alpha. exhibited neither alc. dehydrogenase, ethanol oxidase, nor
 glucose-ferricyanide oxidoreductase activity. Furthermore, the
 respiratory chain of the organism exhibited an extremely diminished amt.
 of cytochrome c and an increased sensitivity of the respiratory activity
 to cyanide or azide when compared with G. suboxydans. The first subunit,
 quinoxinoprotein dehydrogenase, and the second subunit, cytochrome c, of
 the alc. dehydrogenase complex in the membranes of G. suboxydans subsp.
 .alpha. were reduced and deficient, resp. Ethanol oxidase activity,
 lacking in G. suboxydans subsp. .alpha., was entirely restored by
 reconstituting alc. dehydrogenase purified from G. suboxydans to the
 membranes of G. suboxydans subsp. .alpha.; this also led to restoration of
 the cyanide or azide insensitivity and the glucose-ferricyanide
 oxidoreductase activity in the respiratory chain without affecting other
 respiratory activities such as glucose and sorbitol oxidases. Ethanol
 oxidase activity was also reconstituted with only the cytochrome c of the
 enzyme complex. Thus the cytochrome c of the alc. dehydrogenase complex
 is essential in ethanol oxidase respiratory chain and may be involved in

the cyanide- or azide-insensitive respiratory chain bypass of G. suboxydans.

L3 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AB Glucose dehydrogenase of G. suboxydans reacted directly with ubiquinone. The enzyme purified from the membranes of G. suboxydans reacted with ubiquinone homologs such as ubiquinone-1, -2, or -6 in detergent soln. Reactivity of the enzyme with native ubiquinone, ubiquinone-10, was demonstrated in a membranous environment. Dehydrogenase was reconstituted together with cytochrome o, the terminal oxidase of the respiratory chain, into a phospholipid bilayer contg. ubiquinone-10. The proteoliposomes thus reconstituted exhibited a reasonable glucose oxidase activity, the electron transfer reaction of which was able to generate a membrane potential and a pH gradient. Thus, D-glucose dehydrogenase of G. suboxydans donated electrons directly to ubiquinone in the respiratory chain.

L3 ANSWER 4 OF 6 LIFESCI COPYRIGHT 2004 CSA on STN
AB The ***Gluconobacter*** suboxydans respiratory chain has a ***cytochrome*** o as a terminal ***oxidase***. The cytochrome o-type oxidase was solubilized with octyl glucoside after washing the membranes with Triton X-100, and was purified by one-step ion-exchange chromatography. The purified oxidase contains four polypeptides, two b-type cytochromes (b-558 and b-562, and 2 mol of heme/mol of enzyme. The generation of membrane potential and pH gradient was determined by fluorometric methods using carbocyanine and dansylglycine, respectively. Thus, cytochrome o of G. suboxydans was shown to be an ubiquinol oxidase functioning as an energy-generator.

L3 ANSWER 5 OF 6 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN

L3 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AB The G. suboxydans respiratory chain has a cytochrome o as a terminal oxidase. The cytochrome o-type oxidase was solubilized with octyl glucoside after washing the membranes with Triton X-100, and was purified by 1-step ion-exchange chromatog. The purified oxidase contains 4 polypeptides, 2 b-type cytochromes (b588 and b532), and 2 mol of heme/mol of enzyme. The oxidase was shown to be a typical cytochrome o and to have 2 CO-binding sites in the mol. The enzyme catalyzes the oxidn. of ubiquinol, and the activity is inhibited with KCN or quinone analogs. The purified cytochrome o can be reconstituted with phospholipids prepd. from G. suboxydans into proteoliposomes by octyl glucoside diln. The proteoliposome generates a proton electrochem. gradient (inside neg. and alk.) of about -140 mV during ubiquinol oxidn. The generation of membrane potential and pH gradient was detd. by fluorometric methods using carbocyanine and dansylglycine, resp. Thus, cytochrome o of G. suboxydans was shown to be an ubiquinol oxidase functioning as an energy-generator.

=> dis his

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FILE 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS, ESBIODBASE, BIOTECHNO, WPIDS' ENTERED AT 11:59:11 ON 18 OCT 2004

L1 92991 S CYTOCHROME (5A) OXIDASE
L2 7 S L1 (5A) GLUCONOBACTER
L3 6 DUP REM L2 (1 DUPLICATE REMOVED)

=> log h

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